REPORT RESUMES

ED 011 290

VT 000 908

ESTIMATING THE HUMAN RESOURCES FOR RESEARCH IN OCCUPATIONAL EDUCATION IN MINNESOTA.

BY- PUCEL, DAVID J. AND OTHERS MINNESOTA UNIV., MINNEAPOLIS

PUB DATE

66

EDRS PRICE MF-\$0.09 HC-\$0.96 24F.

DESCRIPTORS- *EDUCATIONAL RESEARCH, *VOCATIONAL EDUCATION, QUESTIONNAIRES, SURVEYS, *ADMINISTRATOR ATTITUDES, *TEACHER ATTITUDES, RESEARCH SKILLS, PRACTICAL ARTS, COUNSELORS, INTEREST RESEARCH, TEACHERS, EDUCATIONAL PROGRAMS, MINNEAPOLIS

ONE SURVEY IDENTIFIES EDUCATORS IN MINNESOTA WHO ARE INTERESTED IN CONDUCTING OR RECEIVING TRAINING FOR RESEARCH IN OCCUPATIONAL EDUCATION AND ESTIMATES THEIR PRESENT LEVEL OF RESEARCH COMPETENCE. A SECOND SURVEY IDENTIFIES THE EDUCATIONAL ADMINISTRATORS IN THE STATE WHO HAVE SUPPORTIVE ATTITUDES TOWARD THEIR STAFF'S PARTICIPATION IN OCCUPATIONAL EDUCATION RESEARCH. QUESTIONNAIRES WERE MAILED TO 5,441 PERSONS -- (1) ALL THE VOCATIONAL AND PRACTICAL ARTS EDUCATORS AND GUIDANCE COUNSELORS IN THE STATE AT THE JUNIOR, SENIOR, AND FOST HIGH SCHOOL LEVEL, AND (2) EDUCATORS IN RELATED FIELDS IN COLLEGES. OF THIS GROUP, 454 (8.2 FERCENT) EXPRESSED AN INTEREST IN RESEARCH, AND 410 EXPRESSED A DESIRE TO RECEIVE ADDITIONAL RESEARCH TRAINING. OF THOSE WHO EXPRESSED AN INTEREST, 48 FERCENT HAD ADEQUATE RESEARCH EXPERIENCE. THE MOST INTERESTED PERSONS WERE IN INDUSTRIAL ARTS, GUIDANCE, AND BUSINESS AND DISTRIBUTIVE EDUCATION. THE POPULATION OF THE SECOND SURVEY CONSISTED OF SUPERINTENDENTS, PRINCIPALS, DIRECTORS, DEANS, AND DEPARTMENT HEADS (648 OF 1,186 RESPONDED). APPROXIMATELY 54 PERCENT OF THE EDUCATIONAL ADMINISTRATORS HAD SUPPORTIVE ATTITUDES TOWARD RESEARCH IN OCCUPATIONAL EDUCATION. THEY PERCEIVED THE AVAILABILITY OF LOCAL SUPPORT AS THE MAJOR OBSTACLE FOR INITIATING OCCUPATIONAL EDUCATION RESEARCH PROJECTS. (PS)

ESTIMATING THE HUMAN RESOURCES FOR RESEARCH IN OCCUPATIONAL EDUCATION IN MINNESOTA



David J. Pucel
Brandon B. Smith
Marshall S. Hahn
Willard F. Bailey, Jr.

Minnesota Research Coordination Unit in Occupational Education

MINNEAPOLIS, MINNESOTA

Minneapolis, Minnesota

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

FOR RESEARCH IN

OCCUPATIONAL EDUCATION IN MINNESOTA

David J. Pucel
Brandon B. Smith
Marshall S. Hahn
Willard F. Bailey, Jr.

1966

The research reported herein was conducted and distributed by the personnel of the

MINNESOTA RESEARCH COORDINATION UNIT
IN OCCUPATIONAL EDUCATION
UNIVERSITY OF MINNESOTA
Minneapolis, Minnesota

TABLE OF CONTENTS

																								Page
LIST OF	TABI	LES	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	iii
FOREWORE	• •	• •	•	•	•	•	•	•	·	•	•	•	•	•	•	•	•	•	•	•	•	•	•	iv
CHAPTER																								
I.	THE	FI	RSI	S	UF	RVI	ΞY	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	1
	The			-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	1
	Defi					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	ī
	Obje					•	•	•	•	. •	•	•	•	•	•	•		• .	•	•	•	•	•	
	Meth	od	olo	gy	•	•	•	•	•	٠	•	•	•	•	•	•	•	•	•	•	•	•	•	2
	Find	lin	gs	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	3
	Conc	: 1 u	sio	ns	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	1 2 3 5
II.	THE	SE	CON	D	st	JRV	EY	•	.•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	7
	The					•	•	•	•	٠	•	•	•	9	•	•	•	•	•	•	•	•	•	7
	Obje					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	7
	Meth	od	olo	gy		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•		7
	Find	lin	gs	0	•	•	•	•	•	•	•	•	•		•						•	•	•	8
المعداد منوي	Conc	lu	sio	ns		• •	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	13
III.	IMPL	IC	ATI	ON	S	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	15
APPENDIX		P	OST	С	AR	D.	QU	ES	T	ON	INA	IR	Ε	TC	0	CC	UF	'A T	CIC) NA	L			
-	EDUC	AT	TON		۲E	:RS	ON	ΝE	L	•	•	•	•	•	•	•	•	, •	•	•	•	•	•	16
APPENDIX	B:	P	OST	C	AR	D	Qυ	ES	T 1	ON	INA	IR	E	TC	A	DM	IIN	IIS	TR	AT	OR	S		17

LIST OF TABLES

		Page
1.	Numbers and Percents of Persons Expressing an Interest in Conducting Research and/or Acquiring Further Research Training by Area of Specialization	4
2.	Numbers and Percents of Research Interested Persons by Level of Research Competence and Area of Specialization	6
3.	Administrative Population, Response Rates, and Percents of Respondents with Supportive Attitudes Toward Various Aspects of Research	9
4.	Numbers and Percents of Supportive Attitude Administrators Expressing Various Problems in Initiating Research	10
5.	Response Frequencies of Supportive Administrators By Administrative Position, to Three Problems in Initiating Research	11
6.	Response Frequencies of Supportive Administrators By School Size to the Problem of Staff Availability	12
7.	Response Frequencies of Supportive Administrators By School Size to the Problem of Administering Project Funds	12
8.	Response Frequencies of Supportive Administrators By School Size to the Problem of Availability of Loca Project Support	13

FOREWORD

Every research coordination unit is faced with the task of stimulating and facilitating occupational education research in its state. To accomplish the task it may elect to work with well-known, competent researchers. Units may also choose to identify and cultivate potential investigators as part of a long range effort to increase the research resources in the state. This report describes two coordinated survey studies that constitute an attempt to assess the current human resource potential for occupational education research in Minnesota.

The first survey identifies educators in the State who are interested in conducting, and/or in receiving training for research in occupational education, and estimates their present level of research competence. The second survey identifies the educational administrators in the State who have supportive attitudes toward their staff's participation in occupational education research, and determines the kinds of problems the administration perceive as barriers to initiating research in their schools or school systems. By combining the findings of these two studies, the Minnesota Research Coordination Unit now knows administrators' attitudes and perceived problems in each school employing interested potential researchers. This information will guide the Unit's future stimulation and research training activities, and assist in making dissemination efforts more efficient.

Jerome Moss, Jr., Co-Director Minnesota Research Coordination Unit in Occupational Education

CHAPTER I

THE FIRST SURVEY

The Problem

The problem of the first survey was to identify those persons teaching in Minnesota in fields related to vocational and practical arts education, including guidance counselors, who were either interested in conducting research and/or in acquiring further research training. Since it was hoped that the group identified would ultimately become involved in research, it was also necessary to assess their research competencies.

Definitions

Research Interest: A response (returned questionnaire) was assumed to indicate that the respondent was interested in research, and conversely, a non-response indicated a lack of interest. Interest was classified into categories of (1) an interest in conducting research, (2) an interest in acquiring further research training, or (3) both of the above.

Research Competencies: A competent researcher was defined as a person possessing both adequate academic preparation and research experience, (i.e. a person who is presumably prepared to undertake an experimental research project and carry it to completion with a minimum of technical assistance). On the basis of responses to the questionnaire items (see Appendix A) persons were categorized into one of three categories of academic research preparation: (1) adequate, (2) limited, and (3) inadequate, and one of two categories of research experience, (1) adequate, and (2) inadequate.

<u>Objectives</u>

As indicated in the problem statement the principal questions to be answered by the study were:

- 1. Who are the persons in the population that are interested in conducting research and/or in acquiring further research training in occupational education?
- 2. Is there a sufficient number of persons in the population interested in acquiring further research training to justify the establishment of a research training institute in occupational education?

3. What are the research competencies of those persons in the population expressing an interest in conducting research and/or in acquiring further research training?

Methodology

Population: The population surveyed consisted of a) all the vocational and practical arts educators in the State of Minnesota, 1965-66, including guidance counselors, at the junior, senior and post high school levels, and b) educators in "related" fields in collegiate institutions. The total population of 5441 persons was stratified according to their respective areas of specialization, (e.g. trade and industrial education, home economics education, business education, industrial arts education, counseling, etc.)

The Questionnaire and Mailing Procedures: One mailing was used without a follow-up procedure in light of the assumption that a response indicated interest and no response indicated a lack of interest. The contents of the mailing to the total population consisted of a two-color, printed brochure announcing the establishment and proposed purposes of the Minnesota Research Coordination Unit in Occupational Education, and a printed business reply card questionnaire. The questionnaire contained a number of items about the respondent's research interest and competence. Other items were designed to assess field of specialization and employing institution (see Appendix A.) All recipients were urged to complete and return the card if they possessed an interest in some phase of occupational education research or research training.

Determining Level of Research Competence: A panel of five experienced researchers in the College of Education, University of Minnesota, agreed that a rough estimate could be made of an individual's competence to conduct experimental research by determining the amount and kind of his academic preparation and research experience. In order to evaluate academic preparation the panel further agreed upon the appropriateness and relative weights of the following factors:

- (6) Inferential Statistics
- (4) Research Methods Course
- (3) Research Assistantship
- (2) Descriptive Statistics
- (6) Doctorate Degree
- (4) Masters Degree Plus
- (3) Masters Degree
- (2) Bachelors Degree Plus
- (1) Bachelors Degree
- (O) No Degree

Recency of Research Preparation: (0) 1955 (1) 1956-60 (2) 1961-65

"Adequate experimental researchers were defined as those respondents who had a total score of 16-23 on the above factors; "limited" researchers were defined as respondents with total scores between 7 and 15; "inadequate" researchers had total scores of 6 or less.

At the panel's suggestion, the number and recency of studies completed (including research to satisfy degree requirements) were measured to assess research experience. The following values were assigned to numbers of studies completed: (0) none, (6) one, (10) two-four, (16) five or more. The date of the last study completed determined the recency of experience, and was evaluated as follows: (0) 1955 or before, (2) 1955-60, (4) 1961-65. Only two categories of respondents were identified on research experience. "Adequate" was defined as respondents with a total amount and recency score of 10-20; "inadequate" had a total score of 9 or less.

No attempt was made to combine the evaluations of academic preparation and research experience. Since no data were collected concerning the nature or quality of the research experience, it was assumed that academic preparation would provide the primary basis for evaluating competence to conduct experimental research. Research experience could then be used as supplemental information. As questionnaires were received responses were converted to numerical values, and recorded on a summary card color coded by area of specialization.

Findings

The findings are presented in terms of the objectives stated above.

Objective 1: Who are the persons in the population that are interested in conducting research and/or in acquiring further research training in occupational education?

Table 1 contains a summary of the questionnaire returns classified according to expressed research interests by areas of specialization.

Four hundred fifty four people, or 8.2% of the total population, expressed an interest in research. Of this group, 9.7% were interested in only conducting research, 11% in only acquiring research training and 79.3% in both conducting research and acquiring further research training.

Objective 2: Is there a sufficient number of persons in the population interested in acquiring further research training to justify the establishment of an institute for occupational education research?

Since 360 people indicated an interest in both conducting research and acquiring further training and 50 persons indicated an interest in only acquiring further training, a total of 410 persons in the State expressed a desire to receive additional research training. This appears to be a sufficient number to warrant the establishment of a research training institute.

¹A seven week institute in occupational education research sponsored by the U.S. Office of Education was conducted by the Unit during the 1966 summer session. Eighty applications were received from the 410 persons identified in the study.

Table 1

NUMBERS AND PERCENTS OF PERSONS EXPRESSING AN INTEREST IN CONDUCTING RESEARCH AND/OR ACQUIRING FURTHER RESEARCH TRAINING BY AREA OF SPECIALIZATION

								y **
Specialization	No. Sent	No. Returns	% of	Conduct	Acqu Trai	Acquire Training	Both	
			Returns	No. %	No.	%	No.	86
Miscellaneous	472	32	8.9	9	0		24	
ricultural Education	380	55	14.5	2	9	6.2	44	75.0
				9.1	_	10.9		80.0
and Distributive on	1455	81	5.6	9	11	7 61	64	0
	687	109	15.9	10	6	13.0	06	0.67
Economics Education	696	3.1		0	2	8.2	26	82.6
- 1		+.)	3.6		,	[, y]		C C
Arts Education	1188	126	10.6	\$	13		86	600
Industrial n	396	20	5.1	-1	4	10.3	14	77°8
OVERALL TOTAL	5541	454	8.2	44	50	0.00	360	70.0
				9.7		11		79.3

Objective 3: What are the research competencies of those persons in the population expressing an interest in conducting research and/or in acquiring further training?

In Table 2, the numerically weighted responses to the research competency items are combined and related to area of specialization.

The sum of percentages of columns A, B, and C indicates that about 48% of the respondents have adequate research experience, and that about 52% have inadequate research experience.

The sums of total percentages in column A and D, B and E, and C and F reveal that approximately 7% have adequate academic preparation, 34% limited preparation, and 59% inadequate preparation, respectively.

Conclusions

- 1. The individuals completing and returning the post card questionnaire have expressed their interest in conducting research and/or in acquiring further research training in occupational education. The limited number of responses, however, indicates that persons related to occupational education in Minnesota are generally not strongly motivated to participate in research activities. Among the various areas of specialization within occupational education, the greatest numbers of interested individuals are in industrial arts, guidance, and business and distributive education.
- 2. The numbers of persons expressing a desire to acquire further research training appears to justify an attempt to provide a research training institute in occupational education.
- 3. Most of the persons expressing an interest in occupational education research lack the academic preparation judged necessary to conduct useful experimental studies. The most fruitful source of interested competent researchers is now in the area of guidance.

Table 2

NUMBERS AND PERCENTS OF RESEARCH INTERESTED PERSONS BY LEVEL OF RESEARCH COMPETENCE AND AREA OF SPECIALIZATION

(N=454)

	Adequate	1	Research	Experie	ence.		Inade	Inadequate	Research		Experience	nce
Area of Specialization	Adequate Preparat (A)	ion	Limited Preparation (B)	a ation	Inadequate Preparation (C)	uate ation 3)	Adequate Preparation (D)	te ation)	Limited Preparation (E)	ed :ation :)	Inade Prepa	Inadequate Preparation (F)
	No.	%	No.	36	No.	%	No.	%	No.	%	No.	%
Administration and Miscellaneous (32)	7	21.8	9	18.8	9	18.8	0	0	ທ	15.6	&	25.0 9-
Agricultural Education (55)	-	1.8	10	18.2	15	27.3	0		. 2	3.6	27	49.1
Business and Distributive Education (81)	ัต	3.7	18	22.2	12	14.8	-	1.2	œ	6.6	39	48.2
Guidance (109)	10	9.5	38	34.9	27	24.8	-	6.	17	15.6	16	14.7
Home Economics Education (31)	0	0	0	0	ري د	16.1	0	0	بر 	16.1	21	7.79
Industrial Arts Education (126)	. 4	3.2	27	21.4	18	14.3	2	1.6	15	11.9	09	47.6
Trade and Industrial Education (20)		5.0	m	15.0	9	30.0	0	0	1	5.0	6	45.0
OVERALL TOTALS	56	5.8	102	22.5	89	19.6	4	6.	53	11.7	180	39.6

CHAPTER II

THE SECOND SURVEY

The Problem

The principal purpose of the second survey was to determine the attitudes of educational administrators in the State toward occupational education research in general, and more specifically, toward their own staff's actual involvement in it. Since an actual administrative decision to approve the conduct of a study is a function of particular modifying conditions as well as attitude toward research, the survey assessed problems perceived by administrators in their respective institutions for the conduct of research. These problems were then related to size of school and the administrative position of the respondent.

Objectives

The three major questions to be answered by the study were:

- 1. Who are the educational administrators in the State who have supportive attitudes toward occupational education research in general, and more specifically, toward their own staff's involvement in it?
- 2. What are the problems the supportive attitude administrators perceive as barriers to the conduct of occupational education research in their schools or school system?
- 3. Is there a relationship between the perceived problems identified above, the supportive administrator's position, and size of school?

Methodology

Population: The population consisted of all the a) superintendents of public school districts, b) principals of public junior and senior high schools, c) deans and heads of departments related to occupational education in the University, junior colleges, state colleges, and private colleges, and d) directors of public and private vocational-technical schools in the State of Minnesota during the 1965-66 academic year.

The Questionnaire: Administrators' attitudes toward research and the problems they perceived in conducting studies in their schools were elicited by a printed post card questionnaire (Appendix B).

Four selection type items determined the respondent's positive or negative attitudes toward research in general, occupational education research, and their own staff's involvement in either the conduct of or training for occupational education research. Four additional selection and one supply item were used to determine administrative reasons for not giving complete encouragement to proposed research projects. The selection items dealt with staff availability of local project support while the supply item permitted the addition of other perceived problems. Information concerning the respondent's administrative position and the type and size of his school was also secured by the questionnaire.

Procedures: The printed post card questionnaire was mailed to the total population together with a printed two-color brochure entitled, "Funds Available for Research in Occupational Education." The brochure announced the establishment of the Minnesota Research Coordination Unit in Occupational Education and outlined the availability of government research funds and the procedures to be used in applying for them. The scope of occupational education research was described in the brochure as "...projects designed to help present and prospective members of the labor force acquire the knowledge, skills, and characteristics necessary to contribute to the nation's economic progress." At intervals of approximately four weeks, two follow-up letters were mailed to non-respondents. The completed returned questionnaires were coded for administrative position, school district, size of school², and perceived problem categories.

Analysis: The chi-square statistic at the specified .05 level of significance was used to test for relationships between the problems perceived by administrators, their positions, and the size of their schools. Since the chi-square statistic is most reliable with a minimum frequency of five cases per cell, many potential relationships were not tested; type of school was among those variables excluded because of this limitation.

Findings

The findings are presented in terms of the objectives.

Objective 1: Who are the educational administrators in the State who have supportive attitudes toward occupational education research in general, and more specifically, toward their own staff's involvement in it?

²(1) 1-99 students; (2) 100-199 students; (3) 200-499 students; (4) 500-999 students; (5) 1000-1999 students; (6) 2000-4999 students; (7) 5000-9999 students; (8) 10,000 and over.

Table 3

ADMINISTRATIVE POPULATION, RESPONSE RATES, AND PERCENTS OF RESPONDENTS WITH SUPPORTIVE ATTITUDES TOWARD VARIOUS ASPECTS OF RESEARCH

	·			Percents	nts of	Respon	espondents w	with Supportive		Attitudes To	Toward:
Administrative Position	Population	Resp	Responses	Educa Resea:	Educational Research	Research Occup. E	in duc.	Staff Parin Occup. Research	ticipation Education	Staff Pin Trail	ff Participation Training for up. Ed. Research
5.		No.	%	. o N	ж	No.	. %	No.	%	No.	96
Superintendents	347	265	76.4	265	100.0	265	100.0	258	97.4	255	96.2
Principals and Directors	765	356	46.5	355	99.7	355	7.66	350	986	344	7.96
Deans and Department Head	74	27	36.5	27	100.0	27	100.0	24	88.9	20	74.1
TOTAL	1186	648	54.6	647	8.66	647	8.66	632	97.5	619	95.5

-9-

The population is presented in Table 3 by administrative position, response rates to the questionnaire, and percents of respondents with expressed supportive attitudes toward various aspects of research. The 54.6% of administrators who responded to the questionnaire were overwhelmingly in favor of educational research, research in occupational education, and their own staff's participation in occupational education research and research training. It is likely, however, that the 45.4% of non-responding administrators were less favorably disposed toward research.

Objective 2: What are the problems supportive attitude administrators perceive as barriers to the conduct of occupational education research in their schools or school systems?

Table 4 shows the numbers and percents of supportive attitude administrators, by position, who felt their institutions would encounter certain problems in initiating occupational education research.

Table 4

NUMBERS AND PERCENTS OF SUPPORTIVE ATTITUDE ADMINISTRATORS EXPRESSING VARIOUS PROBLEMS IN INITIATING RESEARCH

(N=648)

Administrative Position	Qualifi	cations	Staff Availa	bility	Use of Facili	School ties		ject	Avai of P Supp	lability roject
	No.	%	No.	%	No.	1 %	No.		No.	%
Superintendents (265)	16	6.0	24	9	2	.8	10	3.8	100	37.7
Principals and Directors(356)	8	2.2	32	8.9	0	0	24	5.6	118	33.0
Deans and Department Heads (27)	0	0	4	14.8	0	0	3	11.1	6	22.2
TOTAL	24	3.7	60	9.3	2	•3	37	5.7	224	34.5

The most serious obstacle to the initiation of occupational education research, in the minds of administrators with supportive research attitudes, is securing local contributions for the support of the project. It is possible that this perception may be changed if made available to them.

Objective 3: Is there a relationship between the perceived problems identified, the supportive administrator's position, and size of school?

Table 5 gives the response frequencies of the supportive administrators categorized by administrative position and their three greatest perceived problems—staff availability, administering project funds, and the availability of local project support. Because of insufficient expected frequencies, the administrative positions of Deans and Department Heads have been combined with Principals and Directors.

Table 5

RESPONSE FREQUENCIES OF SUPPORTIVE ADMINISTRATORS BY ADMINISTRATIVE POSITION, PROBLEMS IN INITIATING RESEARCH

	Staff Av	ailability	Administ	ering Project Funds	Availabi Local Pr Support	lity of oject
Responses	Superin- tendents	Principals, Directors, Deans and Dept. Heads	tendents	<u> </u>		Principals, Directors, Deans and Dept. Heads
A Problem	24	36	10	27	100	124
No Problem	241	347	242	259	134	145
No Response	_	-	13	97	31	114

Application of the chi-square statistic reveals no relationship between administrative position and the administrators perception of whether or not staff availability (time) is a problem in initiating research (χ^2 = .02, P = .90). Even though there is no significant relationship between the superintendent group and the principal, director, dean and department head group, they agreed upon the extent of the problem. On the other hand, there are significant relationships between administrative position and the three categories of administrator responses to perceived problems of administering project funds and availability of local support. (χ^2 = 52.8, P = .001, χ^2 = 30.0, P = .01). These findings seem to indicate that superintendents tend to respond more frequently to financial administrative questionnaire items than principals, et. al., which might logically be expected because of their financial duties and

responsibilities. Because it appeared that the chi-square calculations were unduly weighted by the "no response" frequency, separate calculations were necessary to assess the extent of relationship of only those who responded. There is a significant relationship between the administrative groups in their assessment of problems involved in administering project funds ($\chi^2 = 6.26$, P = .02). Probably because of the nature of their duties and responsibilities the superintendents may be more aware of the mechanics of administering project funds, thus, they do not foresee this as a critical problem for initiating research. On the other hand there was no significant relationship between the two administrative groups on their perception of the problem of availability of local support for research projects. ($x^2 = .46$, P = .50). This finding seems to indicate that administrators in general, are not certain that local support for research projects can be made available, thus, they tend to agree that this is a problem for initiating research.

Tables 6, 7, and 8 present the frequencies of supportive administrator's responses categorized by size of school and according to their perceptions of the staff availability, administering project funds, and availability of local project support problems. Categories of school size have been combined where necessary to yield a minimum expected frequency of five per cell.

Table 6

RESPONSE FREQUENCIES OF SUPPORTIVE ADMINISTRATORS
BY SCHOOL SIZE TO THE PROBLEM OF STAFF AVAILABILITY

Response			Scho	ol Size		JE 758	
	0-99	100-199	200-499	500-999	1000-1999	2000 over	and
A Problem	5	9	23	11	7	5	-
No Problem	19	90	229	129	7 9	42	
No Response	-	-	-	-	-	· -	

Table 7

RESPONSE FREQUENCIES OF SUPPORTIVE ADMINISTRATORS BY SCHOOL SIZE TO THE PROBLEM OF ADMINISTERING PROJECT FUNDS

			School S	ize
Response	0-199	200-499	500-999	1000 and over
A Problem	7	17	6	7
No Problem	95	201	109	96
No Response	21	34	25	30

RESPONSE FREQUENCIES OF SUPPORTIVE ADMINISTRATORS BY SCHOOL SIZE TO THE PROBLEM OF AVAILABILITY OF LOCAL PROJECT SUPPORT

Table 8

			Scho	ool Size	
Response	0-199	200-499	500-999	1000-1999	2000 and over
A Problem	52	104	36	12	10
No Problem	53	113	f54	42	27
No Response	18	35	50	32	10

The chi-square test revealed no relationship between school size and the administrators' responses to the perceived problems of staff availability or the administration of project funds ($\mathbf{X}^2 = 6.0$, $\mathbf{P} = .50$, $\mathbf{X}^2 = 3.4$, $\mathbf{P} = .80$). There is, however, significant relationship between school size and the perceived problem of availability of project support ($\mathbf{X}^2 = 61.6$, $\mathbf{P} = .01$). Administrators in schools with less than 500 students perceive a more definite local support problem than administrators in schools with 500 or more pupils; the latter group is less certain that support will be a real problem.

Conclusions

The following conclusions are limited to the State of Minnesota:

- 1. Approximately 54% of the educational administrators in the State may be considered to have "supportive" attitudes toward research in occupational education and their own staff's participation in occupational education research and research training activities. The remaining 46% of administrators have questionable attitudes towards this type of staff activity.
- 2. Administrators with supportive attitudes presently perceive the availability of local support as the major obstacle for initiating occupational education research projects in their schools. Other perceived problems do not appear to be critical.
- 3. Superintendents seem more willing to make judgments and respond more frequently to questions concerning the potential financial policy problems of administering project funds and availability of local support for projects than does the combined group of principals, directors, deans and department heads. Superintendents also tend to be more optimistic about the problem of administering project funds. However, both groups tend to agree that obtaining local project support constitutes a problem. Administrators of schools with enrollments of less than 500 appear more definite in their perception of a local support problem than are administrators of schools with larger enrollments.

CHAPTER III

IMPLICATIONS

By combining the results of both surveys, the Unit has identified individuals with an interest in research and research training, as well as the attitudes and perceived problems of their administrators toward their participation in research activities. For the purposes of making future stimulation efforts more effective, the Unit may now encourage certain persons to engage in particular types of studies, and provide relevant research training programs for others. The Unit may now also proceed with attempts to change attitudes toward research and to supply individuals with information that will dispel misconceptions about research requirements. Specifically, the Unit should:

- Meet with individuals identified as "competent" researchers with supportive administrators for the purpose of involving them in the conduct of research studies.
- Provide research training institutes, fellowships, etc. for interested individuals who can benefit from them.
- 3. Supply administrators with information about the methods and requirements for securing research funds and contributing partial local support.
- 4. Engage in studies to discover feasible means for increasing interest in occupational education research among educational personnel in the State.

Appendix A

POST CARD QUESTIONNAIRE TO OCCUPATIONAL EDUCATION PERSONNEL

Name	Institution
Address	Field of Specialization
II. Preparation: Check all your Descriptive Statistics Research Assistant No Degree Masters	☐ Acquiring research training ☐ Both formal educational experiences and attainments: ☐ Inferential Statistics ☐ Research Methods Course ☐ Bachelors Degree ☐ Bachelor Plus ☐ Doctorate are greatly of research related experience ☐ Doctorate
Recency of preparation: Before 1955 1956 III. Experience: Total number o	of research studies completed or in progress requiring
	f original data (including degree fulfilling studies) 2-4

Appendix B

POST CARD QUESTIONNAIRE TO ADMINISTRATORS

After Reviewing the Brochure Complete All of the Items.
The Opinions You Give Will Not Commit You or Your Institution in Any Way.

Name(Last)	(77)	
Name of Institution	(First)	(Middle)
rame of institution		
City		
Type of Institution ☐ Jr. High ☐ Private College ☐ Uni	☐ Sr. High ☐ Jr. Coll versity ☐ Area Vocation	lege State College al School Private Tech. School
	perintendent 🔲 Departn	
Do you believe that research (e.g. trade and industrial ed distributive education, industributive	should be conducted or ucation, agricultural educ rial arts, business educati	
in occupational education,	∐ Yes ∐ No	el are qualified to conduct research
4. Assuming that research train members of your staff to par occupational education?	ucidate and become bett	ble, would you encourage certain er qualified to conduct research in
A. Do you consider this an ar	education:	apply for a research grant to con-
☐ Yes ☐ No	alary for the amount of the	tion of his teaching or other duties me he spent on the project?
months: Lites Lino		onduct research during the summer
search: Lites Lino		ister the project funds for the re-
the support of a research i	project in one or more o ltv member for the time l	ald be willing to contribute toward f the following forms? (e.g. all or he spends on the project, overhead No
 Are there any reasons not ind personnel at your school to con 	icated above why you be duct research in occupation	elieve it would not be feasible for onal education? (Please note briefly)

(O) Fold. Staple and Mail